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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS FOR TREATING DISORDERS ASSOCIATED WITH mGLU RECEPTORS INCLUDING ADDICTION AND DEPRESSION

**Abstract:** Methods are provided for treating disorders associated with mGlu receptors by simultaneously inhibiting at least two mGluRs belonging to at least two different groups. In one embodiment, there are provided methods for treating a disorder associated with mGlu receptors 2, 3, and 5, including administering to a subject in need thereof an effective amount of at least one antagonist which modulates mGluR2, mGluR3, and mGluR5. The disorders treated by the method include, for example, nicotine addiction, cocaine addiction, and depression.



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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/10061

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K31/44 A61K31/352 A61P25/24 A61P25/30

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, CHEM ABS Data, WPI Data, PAJ, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>FUNDYTUS ET AL.: "Attenuation of morphine withdrawal symptoms by subtype-selective metabotropic glutamate receptor antagonists"</p> <p>BRITISH JOURNAL OF PHARMACOLOGY, vol. 120, 1997, pages 1015-1020, XP002267683</p> <p>page 1015, right-hand column</p> <p>page 1017; figures 1B,1C</p> <p>page 1018, right-hand column</p> <p>-----</p> <p>-/--</p>	<p>1-5,</p> <p>10-18,</p> <p>20,21</p>

☒ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

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Date of the actual completion of the international search

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/10061

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHIAMULERA ET AL.: "Reinforcing and locomotor stimulant effects of cocaine are absent in mGluR5 null mutant mice" NATURE NEUROSCIENCE, vol. 4, no. 9, 2001, pages 873-874, XP002267684	1-7,9, 20,21
Y	page 873	6,22,28, 31
X	SCHULZ ET AL.: "The metabotropic glutamate receptor antagonist 2-methyl-6-(phenylethynyl)-pyridine (MPEP) blocks fear conditioning in rats" NEUROPHARMACOLOGY, vol. 41, 2001, pages 1-7, XP002267685 page 6, right-hand column	1-3,8,9, 29
X	FUNDYTUS ET AL.: "Effect of activity at metabotropic as well as ionotropic (NMDA) glutamate receptors on morphine dependence" BRITISH JOURNAL OF PHARMACOLOGY, vol. 1113, 1994, pages 1215-1220, XP009023674 the whole document	1-5, 10-18, 20,21
Y	DATABASE BIOSIS [Online] BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 2001, WATERHOUSE ET AL.: "In vivo evaluation of the mGluR antagonist (8H) LY341495" XP002267686 retrieved from BIOSIS Database accession no. PREV200200003805 abstract & WATERHOUSE ET AL.: "In vivo evaluation of the mGluR antagonist (8H) LY341495" SOCIETY FOR NEUROSCIENCE ABSTRACTS, vol. 27, no. 2, 2001, page 2358,	6,22,28, 31

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 03/10061

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-22,27-31

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-22, 27-31

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2. claims: 23-26

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